



Data Analytics Initiative: Business Case

Executive Committee
July 7, 2016

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Canada



Purpose

- Further to the Executive Committee's approval of a Data Analytics Strategy in November, 2015, this presentation:
 - Provides a progress report on the Data Analytics Initiative.
 - Seeks approval of a high-level business case for investments over three fiscal years.
- Our vision is to transform the Agency's capacity to drive better outcomes and decisions by moving from a siloed to an enterprise approach to data analytics.
- In alignment with the approved Strategy, this business case seeks to leverage the Agency's existing investments in analytics and to propose a funding strategy for priority foundational initiatives.



Strategic Objectives

The Data Analytics Strategy is strengthening the CBSA's capacity to deliver a "border of the future" that will be faster, cheaper, and more secure.

- **Securing Canada's borders**
 - Taking advantage of advanced analytics to "push the border out" and to enable interdiction of high-risk travellers and goods as early as possible in the continuum.
 - Supporting effective and integrated enforcement at ports of entry, as well as more effective risked enforcement and criminal investigations.
- **Streamlining the border experience**
 - Providing a seamless experience at the border for low risk travellers and goods, with little or no interaction with border officers.
 - Maximizing comprehensive interaction data on all travellers and goods in real-time throughout the continuum, allowing the Agency to better predict future patterns.
- **Management excellence**
 - More timely, reliable, and accessible data to support the Government's "Results and Delivery" agenda.
 - Integrated financial and operational data for resource allocation and business enhancement.
 - Secure and efficient release of datasets for Open Government. Mitigation of "Information Integrity" risks and improved data integrity for CAGS mobile, internal audits, and evaluations.



Data Analytics Strategy

- An integrated enterprise approach based on increasing our maturity above industry standard over next three years.

Data Governance

- **Governance Structure.** Provide an Agency-wide approach to decision-making on data issues.
- **Ownership.** Designate data standards and centres of expertise, with clear roles and responsibilities.
- **Standards and policies.** Implement common definitions, data quality processes, and an enterprise data model.
- **Data Integration.** Build an integrated data warehouse, drawing on key data from multiple sources.
- **Self-service.** Enable quick access to key reports and data.
- **Competency Centre.** Create a Business Analytics Centre within ISITB for cross-functional support and consultation.

Business Intelligence

Advanced Analytics

- **Data acquisition.** Provide analysts with access to key data from internal and external sources.
- **Emerging tools and techniques.** Explore potential for predictive analytics, visualisation and other advanced tools.
- **Workforce development.** Recruit and develop high-skilled analysts.



Action Plan - High-level Roadmap

	2016-2017	2017-2018	2018-2019
Data Governance	Install Data Governance Center	Complete update data integration platform	Complete data governance quality review
	Complete Business Data Model - Phase 1	Operationalize Business Data Model	Complete data model
	Launch Data Governance implementation and Phase 2	Complete planning of data and information, after 2017	Complete delivery of data and information, after 2018
Business Intelligence	Develop Business Data Model - Phase 2	Complete data integration platform	Complete data integration and quality delivery
	Complete implementation for business intelligence	Complete implementation for business intelligence	Complete implementation and quality delivery
Advanced Analytics	Complete implementation for business intelligence	Complete implementation for business intelligence	Complete implementation and quality delivery
	Complete implementation for business intelligence	Complete implementation for business intelligence	Complete implementation and quality delivery



Progress Report

Data Governance

Completed:

- ✓ Established UP-led Information Management Committee and working groups
- ✓ Completed Data Quality Assessment with participation of all branches
- ✓ Completed first phase of the CBDA Business Data Model

In Progress:

- Initiated data inventory to meet 2018 Open Government Directive obligations
- Began phase 2 of the CBDA Business Model - common Agency data concepts, definitions, and ownership

Business Intelligence

Completed:

- ✓ Completed first phase of Integrated Data Warehouse (IDW) high-level requirements
- ✓ Translated DMRS' learn to-its-its in order to build Data Services capacity

In Progress:

- Initiated SUPER process for the Integrated Performance Reporting (IPR) initiative
- Continue to establish Data Services fundaments within ISTB

Completed:

- ✓ Completed
- ✓ Completed first pilot of predictive analytics for traveller targeting

Advanced Analytics

In Progress:

- National Targeting Centre (NTC) and Science & Engineering in ISTB continuing to conduct pilot projects at next generation technologies
- Several pilots underway; predictive analytics for advanced individual levels and information visualization for situational awareness
- Working with BS partners to develop "community of practice" on analytics



Community of Practice

- The "Tooth to Tail" members identified over 225 FTEs at HICQ which support the performance reporting and analysis function. A further 80 FTEs carry out this function in the regions.
- This is the core community which depends upon the quality and accessibility of performance data, and which will be asked to make "in-kind" contributions to the Data Analytics Initiatives.
- Within this community, the existing centres of expertise include:

Organisation	Roles	Resources
Global Analysis Management and Data Analytics Programme	"Business owner" for data services provides leadership on data governance and integrated performance reporting	FTEs: 6, analysts working closely on the initiative with Performance Reporting teams in Program Area
Enterprise Architecture and Information Management (EAIM)	Leads Open Data initiatives, manages advice for new analytics requirements, and integrates and service alignment	FTEs: 6, analysts, plus contractors
Science & Engineering Directorate (SED)	Provides advanced analytics services for program optimisation, including predictive analytics and data visualisation tools	FTEs: 3, analysts/scientists
National Targeting Centre (NTC)	Data Analytics Unit provides on demand targeting analysis, leads collaboration with DC partners on operational analysis	FTEs: 14, plus contractors
Collaborative and Intelligence Operations	Data Exploration team deploys basic predictive analysis	FTEs: 2

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Related Initiatives (ctd)

• Potential new funding:

- **Refugee Returns.** Assisted Voluntary Return and Reintegration (AVRR) program provides an opportunity to improve the quality and accessibility of immigration enforcement data. This work, in turn, depends on a solid data analytics infrastructure. The data governance tools developed to improve detention and removal statistics, for example, will benefit other program areas as well.
- **Entry-Exit.** A robust data stewardship capacity is required in order ensure the quality of data collected on some 97 million travelers per year. It will be essential to implement this capacity before the relevant legislative amendments take force in July 2017.
- **Other “No-Border” Projects.** Resources for analytics have been included in existing projects such as Master Data Management (\$40 million for identity resolution) and eInsights, which has expended approximately \$30 million for analytics and reporting infrastructure. New deployments based on this infrastructure will be released in mid-2016.
- **Future Projects.** All future CBP’s projects should clearly identify resource requests for analytics, and their alignment with the Agency’s data analytics strategy within the relevant Cabinet documents and TIS submissions. Phase 3 of CARM, for example, will require a major investment in analytics and revenue generation.



Funding Strategy

Guiding principles:

- **Salary:** Minimal new requirements in short term. Use new Entry-Exit funding (\$410,000), internal replication, and in-kind contributions where possible (e.g. task forces). Review requirements in 2017-18.
- **OO&M:** Seek \$2.3M in contributions for this fiscal year. Provide new funding from Refugee Return (AVRR) and Entry-Exit for foundational elements. Funding for subsequent years to be confirmed at a later date.
- **Capital:** Complete detailed proposal this year in preparation for Investment Plan (2017-18) and Budget 2017. Funding will be used to build an Integrated Performance Reporting tool.

	2016-17	2017-18	2018-19	Total
Salary	\$0.4M	\$0.8M (TBC)	\$0.8M (TBC)	\$2.0M
OO&M	\$2.3M	\$2.1M (TBC)	\$1.7M (TBC)	\$6.1M
Capital	-	\$3.0M (TBC)	\$3.0M (TBC)	\$6.0M



Data Governance

Key Requirements, 2014-7

1. Data Governance Funding

Consistent data policies and quality standards are a foundational element for both business intelligence and statistical analysis.

This work is essential for launching the next phases of the Entry-Exit program and for increasing the quality of domestic data for research purposes.

Funding is required to build a data sovereignty network and resolve data integrity issues in support of the Agency's priorities.

2. Domestic Data Model

Domestic information networks have been a major focus of the Agency's data model from 2014-16 using a "data team" approach.

Funding is required to continue efforts for development of the next phase of the Domestic Data Model. Initial focus on integration, management and change.

3. Open Government Coordination Office

Access to Open Government and Data Services Division (578)

Funding is required to achieve compliance with the 735 Open Government Directive, including completing the 2014 Open Government Implementation Plan. A 10-year document for

Business Intelligence

Key Requirements 2016-17

Integrated Data Warehouse

- Reporting for the Agency's key data, including financial and operational data
- Funding requires to consolidate this data according to a service oriented architecture

2. Integrated Performance Reporting

- Use monthly and by means to the integrated data warehouse
- linked to replacement of obsolete '1' data collection system
- Sponsored by Programs Corporate Affairs Competitiveness
- Funding requires to complete coding for Investment Plan 2017-18; and Budget 2017

3. Immigration Data

- CQUAA immigration-related data resides in the IBC's data warehouse.
- Funding requires to complete plan for integration for IBC's data warehouse

4. Business Analytics Competency Centre

- Funding required to provide existing major ISTR on analytics requirements, training, and implementation

Business Intelligence (ctd)

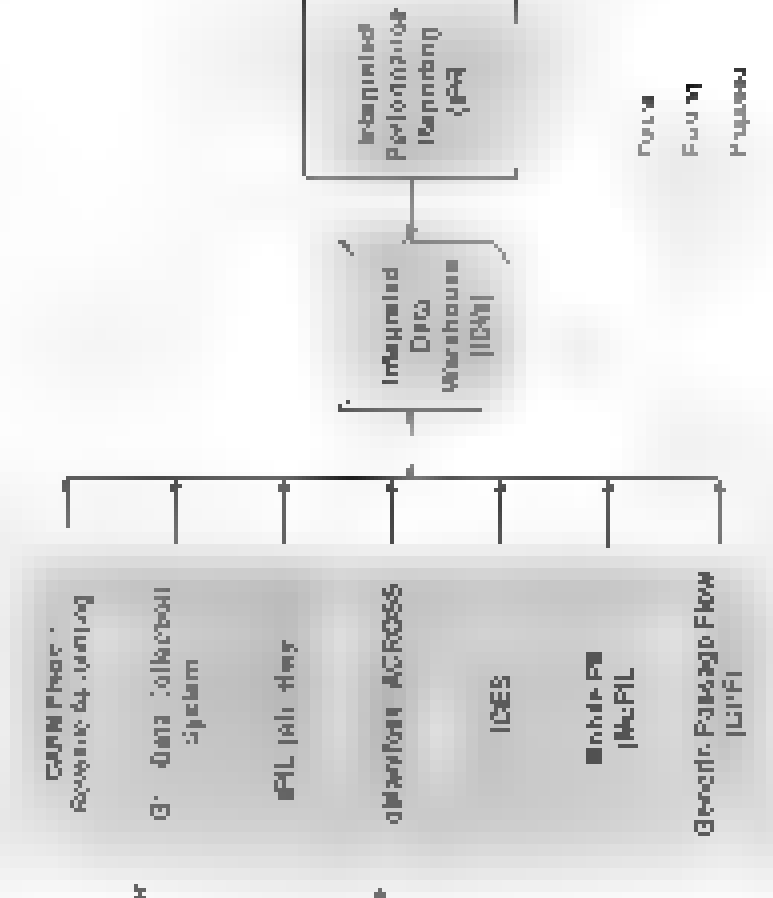
GIS system is a key 'master system' for integrated performance reporting.

Existing GIS System:

- Early 1990 intro. Tool of the day changes position
- On source to key data (e.g. total liquidity (w/m) - 87% year)
- Contains obsolete, duplicate inaccurate data

Potential Replacement:

- Simple data collection - 20m
- Full 1995 (consolidated data only and timely updates)
- Provides consistency of PCEs, thus manual collection





Business Intelligence (ctd)

Initiative and Attachment	2016-17	2017-18	2018-19	Total
Information Data Architecture	No relevant information for this initiative was identified in the agency's FY17 performance reporting and budgetary data.	Breakdown of data architecture for FY17 reporting and budgetary data.	Breakdown of data architecture for FY18 reporting and budgetary data.	
2. Integrated Performance Reporting (IPR)	Cost of IPR for FY17 is \$1,000,000.	Cost of IPR for FY18 is \$1,000,000.	Cost of IPR for FY19 is \$1,000,000.	Cost of IPR for FY17-19 is \$3,000,000.
3. Integrated Performance Reporting (IPR)	Cost of IPR for FY17 is \$1,000,000.	Cost of IPR for FY18 is \$1,000,000.	Cost of IPR for FY19 is \$1,000,000.	Cost of IPR for FY17-19 is \$3,000,000.
4. Integrated Performance Reporting (IPR)	Cost of IPR for FY17 is \$1,000,000.	Cost of IPR for FY18 is \$1,000,000.	Cost of IPR for FY19 is \$1,000,000.	Cost of IPR for FY17-19 is \$3,000,000.

Business Intelligence (BI)

Initiative Lead	2016-17	2017-18	2018-19	Total
3. Informational Technology Data Analytics	<p>Program and technology development and implementation</p> <p>ITM allocated for the program is \$1,000,000</p>	<p>ITM allocated for the program is \$1,000,000</p>	<p>ITM allocated for the program is \$1,000,000</p>	<p>ITM allocated for the program is \$1,000,000</p>
4. Partnership Analytics Community Center	<p>Program and technology development and implementation</p> <p>ITM allocated for the program is \$1,000,000</p>	<p>ITM allocated for the program is \$1,000,000</p>	<p>ITM allocated for the program is \$1,000,000</p>	<p>ITM allocated for the program is \$1,000,000</p>
5. Total	<p>ITM allocated for the program is \$1,000,000</p>	<p>ITM allocated for the program is \$1,000,000</p>	<p>ITM allocated for the program is \$1,000,000</p>	<p>ITM allocated for the program is \$1,000,000</p>



Advanced Analytics

Key Requirements, 2016-17

1. Operational Analytics

Key required supports for analytics in the National Targeting Centre and Intelligent Operations including key data integration and management
Funding required for desired planning, architecture, technology improvements

2. Program Optimisation

Support required for Source and Engineering's predictive analytics pilots and development of a recruitment strategy for data scientists
Funding also required for Source and Engineering work to support Entry-Exit

3. Data Acquisition

Funding required to develop Acquisition strategy (for both internal and external data), and to resolve security and privacy issues. Essential support for operational and program analytics

4. Outcomes Analytics

Funding required to conduct pilot in key practices within the Public Safety portfolio and to progress a business case and testing to review



Advanced Analytics (ctd)

The CBRA is actively using data analytics to fulfil its mandate to support pre-arrival risk assessment leveraging commercial and travel data bases, social media, geospatial information, and operational models.

Examples include:

- Predictive analytics models to improve traveller and commercial targeting and strengthen intelligence management levels.
- Analyzing open source data (social media) to conduct linked inbound air traveller risk assessment for national security, incorporating (a) airport as information sources, image analysis, and external web sites as identified by 4, Inc. Security Inc.
- Journey planning, analysis, data visualization (Geospatial), network analysis and other techniques.
- Operations research to improve scheduling of Border Service Officers and customs allocation.

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Advanced Analytics (cda)

Funding Summary

Data Governance	\$ 170,000	\$800,000	\$540,000	\$2,700,000
Business Intelligence	\$ 880,000	\$865,000 + capital cost \$2M	\$895,000 + capital cost \$3.4M	\$2,840,000 + capital cost \$6M
Advanced Analytics	\$ 740,000	\$ 50,000	\$ 000,000	\$2,840,000



Next Steps

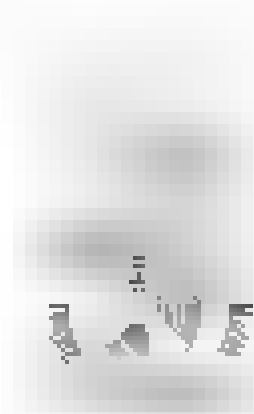
- **EC decision required:**
 - Approval for proposed funding strategy including allocations for 2016, 17 AVR (\$1.8M), Entry-Exit (\$0.7M), STB (\$0.25M)
- **Provide progress reports**
 - Information Management Committee quarterly.
 - Executive Committee (December 2016).



Big Data at the CBSA

Preliminary Overview
for the World Customs
Organization

June 2016
Programs Branch



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Preliminary Overview for the World Customs Organization.

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1 Introduction:

1 Background

The United Nations Organization (UNO) has declared 2015 as the year of Technical Systems Progress in Employment (TSP-2015). It would involve organizations together and share experiences, best practices, and promote the deployment of technical professionals. <http://www.un.org/News/Press/docs/2014/Jan/20140121.un.001.doc.pdf>

By promoting the expansion of returns the WPC hopes to recognise all the different types of IT IT service landscape with a broader data collection and the expanded number of digital data from important processing units of companies. Besides also and other diagrams not only border processing activities but greater re-employment activity of a whole

The UK CH has ordered 125A safety sample by limited question: What does my data mean to .350? It is often to bring our experience to the table on a 100% of the new 100% (100%) (100%) or data sample (100%) by 0/12 (100%) and therefore, principles of big data (100%) (100%)

Volume	The quantity of generated and stored data per day or per second or per minute or per hour or per day or per week or per month or per year
Velocity	The amount of data that is available to the user in real time
Veracity	The speed at which data is created and ingested into the data lake
Value	The amount of data that is available to the user in real time

1.2 Methodology

As the concept of big data is still emerging and not necessarily well understood, the Global Trade Help Agents (GTHA) of the U.S. Customs and Border Protection (CBP) and the Program Manager proposed a questionnaire to the Data Analytics Working Group (DAWG) to ask a wide range of questions about using big data in the field. The questionnaire was put together with the following questions and responses in the attached table. It was also made available to the working group that would answer the questions by the WAO. A high-level survey was distributed to the Arkansas Airport Security Group members, a working group across the WAO, and the responses compiled and consolidated in a document. The questions included in the survey are listed below in reference to Appendix B.

1. The teacher is a facilitator of learning, not a transmitter of knowledge.

2. The teacher is a learner, not a knower.

3. The teacher is a collaborator, not a controller.

4. The teacher is a coach, not a critic.

1.4 Moving Forward

5. The teacher is a leader, not a follower.

6. The teacher is a designer, not a deliverer.

7. The teacher is a mentor, not a manager.

8. The teacher is a partner, not a parent.



3 Conclusion: What does 'big data' mean to CBSA?

Big data presents an emerging opportunity for the CBSA to fulfil its mandate in a more efficient and effective way. By leveraging big data and strong use of all available (open) sources of data, we can transform the CBSA into a better service to make informed decisions having to do with the well-being of the nation and security provisions at the ports of entry. As is the case with big data in other sectors, the advanced analytics community within the CBSA leveraging big data to fulfil potential will require addressing some key challenges as it works on this agenda.

Contacts

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4 Appendix A WCD News Release

World Economic Forum releases 2014 report on the state of Digital Innovation

Geneva, 11 June 2014 – The World Economic Forum (WEF) today released its annual report on the state of Digital Innovation, titled "The New Digital Reality: How Digital Innovation is Reshaping the Global Landscape". The report highlights the impact of digital technologies on the global economy and society, and provides insights into the challenges and opportunities ahead.

The report identifies four key trends shaping the digital landscape: the rise of the digital economy, the emergence of new digital business models, the increasing importance of data, and the growing role of digital technologies in society. It also highlights the challenges of digital innovation, such as the digital divide, data privacy, and the impact of digital technologies on the labor market.

The report also provides insights into the opportunities of digital innovation, such as the creation of new jobs, the improvement of productivity, and the enhancement of the quality of life. It emphasizes the need for a global digital innovation ecosystem that fosters collaboration and innovation across different sectors and regions.

The report is part of the WEF's annual "Global Competitiveness Report" (GCR), which assesses the competitiveness of different countries and regions. The GCR is a key reference for policymakers, business leaders, and the public alike. The WEF's annual report on the state of Digital Innovation is a key reference for policymakers, business leaders, and the public alike.

The report is available for free download on the WEF's website. The WEF's annual report on the state of Digital Innovation is a key reference for policymakers, business leaders, and the public alike. The WEF's annual report on the state of Digital Innovation is a key reference for policymakers, business leaders, and the public alike.

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The **AKO** benefit then will be awarded on international systems for which is celebrated annually the global "Internet Freedom" and is given in honor of the "inauguration" of the Internet expansion fund (IC) which took place on 26 January 1993.

The **AKO** (AKO) has a strong community to make its impact 2016. The group



5 Appendix B Questionnaire

The purpose of this questionnaire is to solicit input for a BAC request to CBSA on its development, use and utilization of big data and related to privacy and II.

2016 has been named the year of digital systems. Progressive engagement by the WFO and its associated agencies CBSA and the other agencies placed along with other agencies members. BSA has been asked to provide some introductory information on our big data footprint.

To help introduce CBSA's big data, data use and application capabilities and how it integrates with our big data clients, CBSC provide feedback where applicable to the following questions:

1. What does big data mean to your area of CBSC?
2. How is your area of CBSC applying the characteristics of big data?
3. What sources of data does your area consume from CBSC?
4. What sources of data does your area consume from external sources? Provide examples and how they integrate with internal CBSC data. (please)
5. Does your area consume any sources of unstructured data?
6. What big data technical sources are currently being employed in your area? (list & describe)
7. What are some ways you feel CBSC could improve its execution of big data?
8. What other suggestions do your area have with respect to big data?



Canada Border Services Agency
Agence des services frontaliers du Canada



Executive Committee
November 2015

Data Analytics

Programs Branch
Information Science and Technology Branch

110 2

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Canada



Purpose

- Outline a vision for HSA's Data Analytics Initiative to transform the Agency's capacity for data governance, business intelligence, and advanced analytics
- Seek approval for a 3 year action plan and governance framework

What is “Data Analytics”?

- Data Analytics is an integrated approach to gathering, organizing, and using our data





Strategic Objectives

The Data Analytics Initiative's goals are closely aligned with the agency's strategic objectives

Securing Canada's borders

Canadiana requires more efficient, faster, and more secure operations

Streamlining the border experience

Improve the border experience for all travellers and cargo

Management excellence

Efficient, reliable and secure system architecture, reporting and decision making
Optimized data and analytics
Secure and efficient network of data

This initiative is driven by the need to build a culture of analytical excellence. It seeks to mitigate the 'Information Integrity' risks highlighted in the BSA's Enterprise Risk Profile



Why This Matters

1. Data is everywhere, and it's growing.

2.

3. Data is everywhere, and it's growing.

4. Data is everywhere, and it's growing.

5. Data is everywhere, and it's growing.

6. Data is everywhere, and it's growing.

7. Data is everywhere, and it's growing.

8. Data is everywhere, and it's growing.

9.

10.

We are building a world where data is everywhere, and it's growing. We are building a world where data is everywhere, and it's growing. We are building a world where data is everywhere, and it's growing.

CDP is a data experience with the ability to transform raw data into meaningful insights.

Agencies are looking for a way to get their data in a format that is easy to use, and they are looking for a way to get their data in a format that is easy to use.

We are looking for a way to get our data in a format that is easy to use, and we are looking for a way to get our data in a format that is easy to use.



Why We Need Data

Budgeting and Forecasting

Conduct budgeting and forecasting studies for better resource management and ensure required resource are in place to meet future demands

Performance Management

Align operational and program performance indicators and measure and monitor program effectiveness through tracking these indicators

Statistical Reporting

Perform statistical analysis on trends in program performance over an extended period to determine change deeper understanding of key areas, e.g. smaller volume revenue collected

Operational Reporting

Leverage data in a consistent and efficient manner to gain a real understanding of what happened and what is happening across the whole better management to day operations

Operational Intelligence

Integrate internal and external data to conduct advanced analysis to make meaningful predictive analysis in support of targeting, intelligence collection and threat/robustness

Program Optimisation

Apply analysis to improve program design and transformation e.g. resource allocation, trade fraud detection, waste management

Many Functions Involved

IS7B

- Collecting high-level and information
- Management systems: enterprise in the architecture and IT
- Large and small data center or work on its operational and service level development and data center and support

Programs

- Data Function Center data governance
- Performance Regulation and data validation and reporting and evaluation
- For security and support Program Integrity and and evaluation
- For Security and Regulation and support

Operations

- General Agencies and operations and support and analysis in the scope of targeting and evaluation and operational intelligence
- General Corporate Production Support Division and regional performance monitoring and analysis
- Intelligence Data Explosion and support

Corporate Affairs

- Corporate Planning and Reporting and support and performance monitoring and support
- Corporate Planning and Reporting and support and performance monitoring and support
- Corporate Planning and Reporting and support and performance monitoring and support

Comptroller

- General Agencies and operations and support and analysis in the scope of targeting and evaluation and operational intelligence
- General Corporate Production Support Division and regional performance monitoring and analysis
- Intelligence Data Explosion and support

Human Resources

- General Agencies and operations and support and analysis in the scope of targeting and evaluation and operational intelligence
- General Corporate Production Support Division and regional performance monitoring and analysis
- Intelligence Data Explosion and support



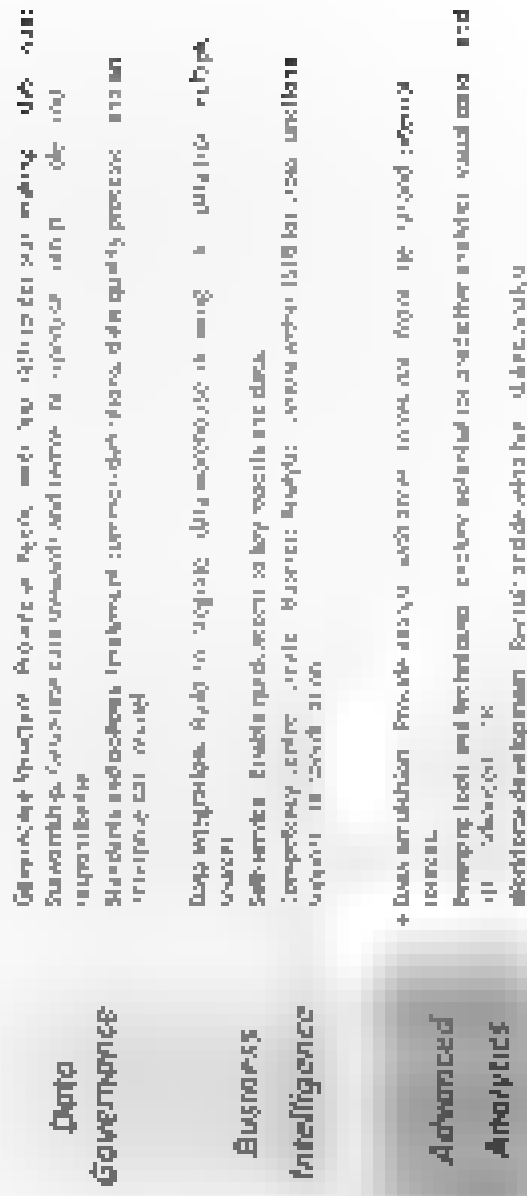
Progress to Date

- Data Fusion initiative launched by PRC in December 2014
- Committee and working groups established in February 2015
 - Focus on governance, collaboration, enterprise basis
- Maturity assessment in April 2015 found Agency is below the industry average with some significant gaps including
 - In enterprise business analysis strategy
 - Operational intelligence data and linking challenge
 - Performance reporting highly fragmented and manual
- Advances made in managing data
 - eManifest, Entry-Exit, Risk and other projects building data analytics components
 - National Border Operation Centre use of API/PHB logs and release information, social media
 - Force and Engineering team piloting the use of predictive analytics for Traveller targeting
 - Web Cast/Media protocols for user-friendly access to data
 - Open Government Initiative/Editor Plans release of key datasets



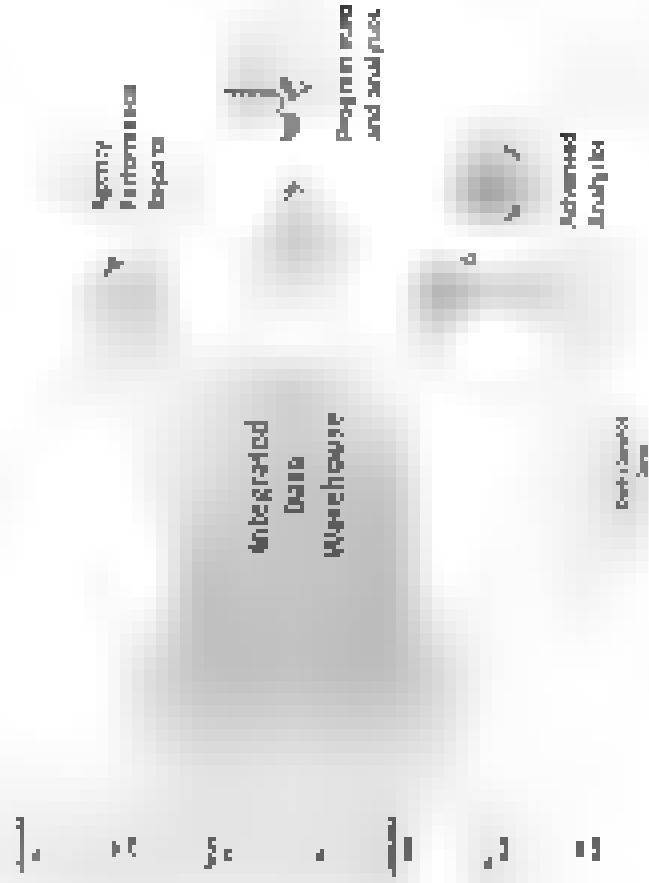
A New Strategy

- An integrated enterprise approach based on increasing our maturity above industry standard over next three years





The Model of the Future





How We Get There

From

Data Governance

Disconnected and inconsistent silos of operational systems and databases run on many different hardware and software configurations (e.g. data centers) for different environments
Lack of consistent guidance in data entry and collection with no accounting

To

Data Governance refers to policies, standards, and best practices that are implemented and managed with the goal of ensuring the accuracy, consistency, and reliability of data and other resources across the enterprise data management lifecycle
Data management is placed in place for key data insights, such as, "What is the impact?"
Data management is not just a goal, it is a process

Business Intelligence

Producing reports on labor-intensive process to error and difficult to repeat
Manual allocation from variety of sources
Gap in data collection
Data housed in silos, data warehouse
Fragmented human resources and operational data not integrated
Overlap and duplication in analytics work undertaken by major product

Integrated Data Warehouse Substrate
PML APIs and not just a Manual
User-friendly access to reports and power user base will emerge
Operational, financial and human resource data are integrated into data warehouse
Full integration with Service, Big Data Management Framework

Integration - Service - Vision II



How We Get There (continued)

From	To
Advanced Analytics better for requesting internal Agency data due to regulatory constraints, e.g. information is only internally available.	Harvesting data to date with often limited data system where appropriate.
Cost reduction with a new fresh data data queue and stored to adequate size enable better data response due to less data volume and change up requirements from data orienting to cost orienting in refresh and prefer advanced analytics over traditional query request driven and measure with additional data stored to provide guidance to the provider	Access to a new methodology for operations, better use ingesting and analytical available Access to external source of request of use, data mediated. availability of data to test a strong not human machine data spread at an order of magnitude within each Branch



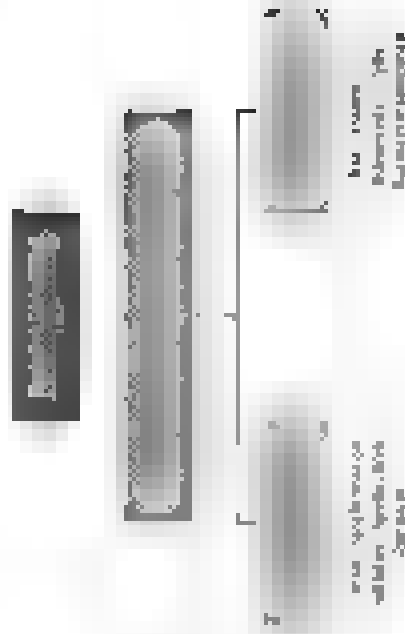
Proposed Governance

Key Roles

Vice President STB. TBG-mandated role & Information Management Senior Official
Duties include delegated authority to approve release of Open Government datasets.
All Branches. Shared responsibility to manage Agency data as a corporate asset. STB manages enabling technology or processes.

New Information Management Committee

Co-chaired by two STB TBG.
Approve strategies, policies and processes for management of information and data.
Collaborate with other up-stream DS representatives from all Branches.
Working groups and ministerial network.
Manages existing Data Fusion and IM initiatives clearing committee.



Business Case

- To date, the direct costs have been covered by Programs Branch and ISTB
- Funding on project by project basis received from multiple sources such as Refugee Reform, eManifest and Entry Exit
- However, full business case to be developed to better track and manage all investments and results
- Funding will be required including from existing resources. For
 - Service and C&M annually to strengthen data governance and support Open Government
 - Expanding our capacity for advanced analytics
 - Capital funding to launch the Integrated Data Warehouse
- Business case to be completed by Spring 2016 for E consideration
- Integrated into the Agency's business plans and priorities

Action Plan

2003

THE

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“Complete business case
to sell a
Alignment with Agency
business planning.
Management report to
senior management
on impact of the
program.”

Number of subjects in the treatment group	Number of subjects in the control group
100	100
200	200
300	300
400	400
500	500
600	600
700	700
800	800
900	900
1000	1000

Order Form

<p>*Ergonomics information management, decision-making, and politics.</p> <p>*Health quality assessment and quality management.</p> <p>*Healthcare delivery, modelling, and related information systems.</p> <p>*Type: Conference.</p> <p>Co-sponsors: none.</p>	<p>40</p> <p>40</p> <p>40</p> <p>40</p> <p>40</p>
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[illegible]



Action Plan (continued)

FY 2016-17 FY 2017-18 FY 2018-19

Business Intelligence

Strategic Initiative	Program/Department	Project/Initiative	Priority	Timeline	Owner
Strategic Initiative 1	Business Intelligence	Implement a new data warehouse	High	2016-2017	John Smith
	Business Intelligence	Implement a new data warehouse	High	2016-2017	John Smith
	Business Intelligence	Implement a new data warehouse	High	2016-2017	John Smith
Strategic Initiative 2	Business Intelligence	Implement a new data warehouse	High	2016-2017	John Smith
	Business Intelligence	Implement a new data warehouse	High	2016-2017	John Smith
	Business Intelligence	Implement a new data warehouse	High	2016-2017	John Smith

FY 2016	FY 2017	FY 2018-19
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
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92	92	92
93	93	93
94	94	94
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97	97	97
98	98	98
99	99	99
100	100	100

Advanced Analytics		Data Source		Model Type		Performance Metrics	
Classification	Decision Tree	Accuracy	0.85	Precision	0.82	Recall	0.88
Regression	Linear	R-squared	0.78	Adjusted R-squared	0.75	F-statistic	12.34
Clustering	K-Means	Silhouette Score	0.92	Calinski-Harabasz Index	1.23	Dunn Index	0.45
Association	Apriori	Support	0.15	Confidence	0.65	Lift	1.5
Time Series	ARIMA	MAPE	0.05	RMSE	1.2	MAE	0.8



Next Steps

- **Decision required:**
Approve strategy and governance framework
- **Align with Agency Priorities in FY 2016-17**
Integrated Business Plan, Capital Plan, etc.
People Strategy
- **Progress Report every 6 months**
Program Policy Committee *September 2026*
Executive Committee *June 2026*

Canada Border Services Agency

Big Data Assessment - Ex

March 28th 2014

2014

Agenda

Executive Summary

Detailed Recommendation

Commonwealth's Financial and Human Resources Organization's Role

Next Steps Conclusion

Executive Summary

B.g Data Assessment Overview Approach

Inter-organizational work that is data-driven and that is designed to solve

Key areas

1. Agency Drivers
2. Data Strategy
3. Analysis and Insights
4. Drive Change
5. Measure Results

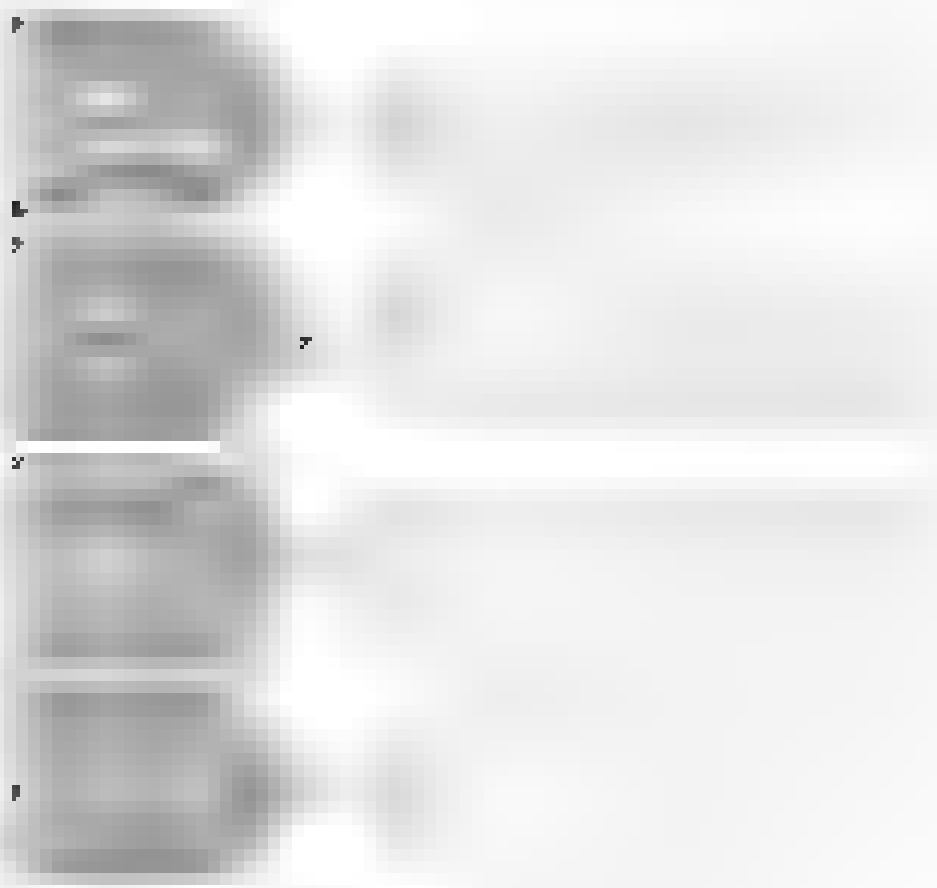
Business Process Analysis and Design

Develop and implement a data-driven business process

Business Process Analysis and Design

Executive Summary

Big Data Means Big Key Findings



Supporting
Mobile
Marketing

Augmented
Reality and
Location Data
Across Agency

Plan for a Big
Data Platform
Investment

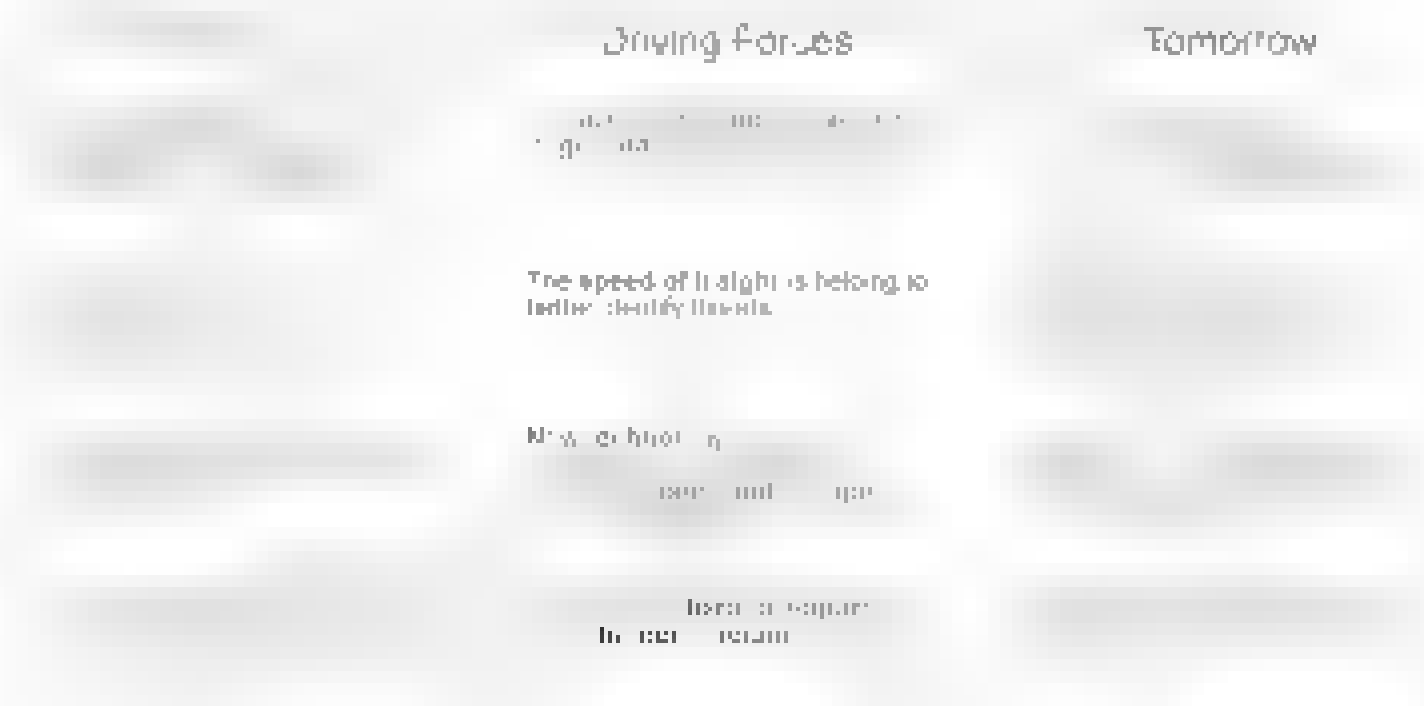
Get Small
Think Big
Move Forward

EY

Canadian Border Services Agency

Canada's leading border management agency

There are a number of driving forces which are changing our landscape of CBSA



How does the CBSA organize and invest to prepare for the demands of tomorrow

Common Practices and Initiatives Across Other Commercial Industries

Organizational
Drivers

6

Data Strategy

Analysis and
Insight

Drive Change

Develop durable mechanisms for transforming insight into action

Measure Results

EY

Assessment Overview

At the end of this assessment, you will be able to:

- Identify the data sources and data types used in the assessment
- Identify the data sources and data types used in the assessment
- Identify the data sources and data types used in the assessment

Big Data Assessment and Scores

Agency Drivers
5

Primary Focus is it as assigned

Agency Drivers: Evaluated how the future goals are
the Agency

Data Source

Measure Results

Data Strategy

1. Analysis and Insight: Evaluates which methods are
used

True Large

Analysis & Insight

4. Data Use

5. Measure Results

Detailed Recommendations

Agency Drivers

[01 02 03 04 05 06 07 08 09 10 11 12]

Current Situation

Since the agency's current situation is not ideal, it is necessary to identify the issues that are causing the current situation. The issues that are causing the current situation are the lack of a clear vision, the lack of a clear mission statement, and the lack of a clear set of values. These issues are causing the current situation to be unstable and uncertain. The current situation is not ideal because it is not clear what the agency's vision, mission, and values are. This makes it difficult to create a clear and consistent strategy for the agency. The current situation is also not ideal because it is not clear what the agency's goals are. This makes it difficult to create a clear and consistent plan for the agency. The current situation is also not ideal because it is not clear what the agency's priorities are. This makes it difficult to create a clear and consistent focus for the agency.

Issues

Since strategic agency objectives are unclear, a project and data needs it makes it is difficult to create a go-forward big data technology plan. The current situation is not ideal because it is not clear what the agency's vision, mission, and values are. This makes it difficult to create a clear and consistent strategy for the agency. The current situation is also not ideal because it is not clear what the agency's goals are. This makes it difficult to create a clear and consistent plan for the agency. The current situation is also not ideal because it is not clear what the agency's priorities are. This makes it difficult to create a clear and consistent focus for the agency.

Ranking

The current situation is not ideal because it is not clear what the agency's vision, mission, and values are. This makes it difficult to create a clear and consistent strategy for the agency. The current situation is also not ideal because it is not clear what the agency's goals are. This makes it difficult to create a clear and consistent plan for the agency. The current situation is also not ideal because it is not clear what the agency's priorities are. This makes it difficult to create a clear and consistent focus for the agency.

Recommendations

The current situation is not ideal because it is not clear what the agency's vision, mission, and values are. This makes it difficult to create a clear and consistent strategy for the agency. The current situation is also not ideal because it is not clear what the agency's goals are. This makes it difficult to create a clear and consistent plan for the agency. The current situation is also not ideal because it is not clear what the agency's priorities are. This makes it difficult to create a clear and consistent focus for the agency. This should also serve as the introduction to my data user experience journey.

Data Strategy

[0000 : 0000] 0000 : 0000 0000 : 0000

Current Situation

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Ranking



Recommendations

- 4. Implement 'big data' platform in a secure environment

Data Strategy

[Content is a digital footprint]

Current Situation



Ranking



Recommendations



[illegible]

Ranking.

6. 30. 000000 4 10.05

Measure Results

Current Situation: 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
 Ranking: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Current Situation

Ranking



95.12%

Recommendations

Recommendations Prioritized and Organized into Roadmap

Point Solution vs Foundational Capability

Point solution is a single tool or application that addresses a specific business problem. Foundational capability is a set of skills, knowledge, and processes that enable an organization to effectively manage its data and analytics across the entire organization.



Agency Drivers

Two drivers to point solution capabilities - Data strategy (visibility and visibility effects) operational level to be streamlined through data analytics

Data Strategy

Developing data strategy designed to support the achievement of strategic goals
 - Develop data strategy - Data strategy
 - Create high-level technology roadmap
 - Create a data governance framework for the new strategy
 - Develop data strategy standards and metrics to measure the new strategy
 - Develop data management capabilities - data and data management
 - Develop data strategy for data governance framework
 - Create organizational structure for data governance framework

Analysis & Insights

Help to develop data strategy designed to support the achievement of strategic goals
 - Create and the governance framework for the new strategy
 - Create data management capabilities - data and data management
 - Create data communication capabilities between the BSCs and the advanced analytics team

Data Change

Standard Portfolio

Design to data strategy to support the data strategy of the new strategy



Data Strategy

Developing data strategy designed to support the achievement of strategic goals
 - Develop data strategy - Data strategy
 - Create high-level technology roadmap

Analysis & Insights

Data Change

Design to data strategy to support the data strategy of the new strategy
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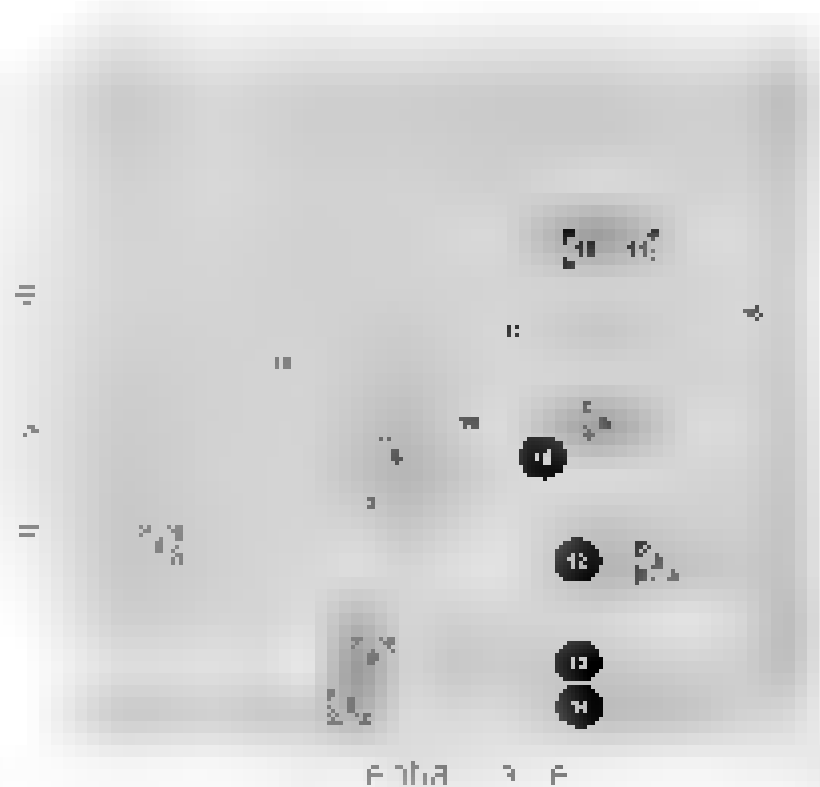
Standard Portfolio

Design to data strategy to support the data strategy of the new strategy
 - Create data management capabilities - data and data management
 - Create data communication capabilities between the BSCs and the advanced analytics team

Portzation Quadrant

2. 4% of the population is aged 100 or over.

Kelecom 2 Actions



Roadmap

Project Roadmap - 2024 - 2025

<Timeline>



Next Steps Conclusion

EY

Next Steps

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Canada Border
Services Agency

Agence des services
frontaliers du Canada



CBSA Enterprise Information Management (EIM) Strategy 2016 - 2018

Apollo ID: 3664138

Revision: 2018-06-28

PROTECTION • SERVICE • INTEGRITY

Canada

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1 Setting the Stage

The exponential growth of information, the multi-task of indexes – diverse but variable market of information – makes it optimizing the information a complex task, unless the necessary parameters are giving the right information in enough depth.

While methodology – systems, tools and technique – for managing information have evolved over the last decade, strategies for information systems are still all over the map, with the future direction of the global digital economy undecided.

In general, strategy aims to initiate a much needed paradigm shift of how the information management approaches are viewed – to shift into a modern way through the following way:

	Current	Future
Role of CISA's Enterprise Information Management (EIM) division	replace information systems to deliver data and information to the customer	to search and deal with business information, planning, forecasting, and response quickly and frequently
Approach to deliver services	standard, different services, web services One size fits all	flexible, different services, web services, mobile, cloud Many size fits market
Valuing corporate information	if unstructured information is used as data, important data is maintained and not discarded, kept	keep data, generate a never collected, keep 99.99 percentage Data has value, use it
Archiving proper information Effect to management	Reliance on expensive, outdated technology to properly manage data, to the risk	keep data, use it, make it, develop it, use it, update it, use it, distribute it, use it, manage it, use it Use data, use it, generate
Methodology	Waterfall, serial, multi-step, high-risk	iteration, parallel, single step, skip-step, error, no final, long, iterative
Information as a Resource of Business Value	no value, indirect, transactional, repetitive, single, not needed to achieve the business	value, highly integrated, transactional, generate plan and measure, change, use, about it, information

- ✓ Information protection for law
- ✓ Higher control and protection of personal information
- ✓ Sustainable development objectives

2. Respond to current pressures affecting the Agency

■ Agency Issues

- ✓ Aging and deficient information flows and processes
- ✓ Item 'Unauthorized'
- ✓ Information hoarding
- ✓ Lack of oversight on all of the Agency's information holdings
- ✓ Agency does not know where and how the information is
- ✓ Limited Reach of Information Management Department
- ✓ Difficult implementing efficient electronic Records Management processes

■ External Issues

- ✓ Access to and security of BS and systems storage and data in information management
- ✓ BS Access in Records/Process extended to case history
- ✓ BS Access in Open Government
- ✓ Access to and security of BS and systems storage and data in information management requirements
- ✓ Access to and security of BS and systems storage and data in information management requirements
- ✓ Access to and security of BS and systems storage and data in information management requirements
- ✓ Access to and security of BS and systems storage and data in information management requirements

3. Respond to the Agency Internal Code of MI (2015-2016)

- In such reported external findings it raised the following recommendations to address the information management responsibilities issues available
- ✓ Implement and communicate standards for data governance across the Agency
- ✓ Develop and implement appropriate standards for data governance across the Agency
- ✓ Monitor and Report the data governance

2.4 Strategic Response

In response to E331, organisations will take strategic action. It encompasses taking the following steps:

- ✓ initiate transformational change in their process (for example, change and
- ✓ adopt appropriate policies in the post-repeal strategic direction that is being achieved internally.

Information Management




The focus of the re-alignment of the Information Management is to ensure the need to deliver effective and relevant information to all modernising its operating capability to deliver agreed information flows. The transformational action will be an integral part of the Strategic Roadmap.

In strategic response, the following transformational actions:

- ✓ Perform the assessment and internalise the need
- ✓ Develop Information Management Service Model
- ✓ Integrate the Functions across the Agency
- ✓ Develop IM Plan and Investment proposal
- ✓ Develop Training & Development Plan

Strategic Direction

The following strategic direction helps understand and explain strategic to actual flow:

	Strategic Direction	Goal
	HS Information Managed Responsibly	Facilitate user and management responsibilities through the creation of an information accountability framework that directs the use of Apple for creating, using, disseminating, storing and disposing of information (e.g. lifecycle management).

In defining the information strategy the firm has to define and adapt processes defined in the components of strategy – information in Management Strategy as follows:

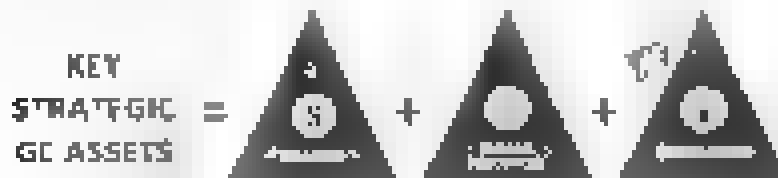


5 Value Proposition

5.1 Information as a Strategic Asset



Information is a strategic asset for companies because the value of their strategic information is not a public good:

- Information can be created and destroyed – but is not subject to much destruction
- Companies can control the usage of their data and create value, produce new knowledge
- Companies can also destroy value through using information



5.2 Benefits

In working towards the vision, the agency and its workforce can expect to see several benefits:

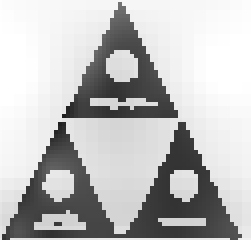
 <p>Users</p>	<ul style="list-style-type: none"> • an electronic environment that brings efficiency, transparency and collaboration in the workplace • increased worker engagement and satisfaction • desktop environment – electronic environment consistent with current desktop applications and • multi access to complete and authoritative information for better deliver
 <p>Agency</p>	<ul style="list-style-type: none"> • Efficient management across electronic process and information flow • Higher quality of information that can be able to be used for better work • Reduces the amount of backlogs, improve the complete delivery of services and products to the public • Information management strategy, a top and bottom control system, legal and regulatory environment

6 Impetus for change

6.1 Current State

The agency has a relatively young (in program 15 years old) workforce more of 4000 persons involved in the team made towards compliance to the 11th Reforms program. However, the existing ICT based infrastructure for supporting work in the line has not come to full use in coupling the agency programs together – line

While there is a need for an interface with businesses – all require that standards to be a foundation for their support services

	<p>in relation to government of sector enterprise information management strategy <i>Information</i> <i>Management</i></p> <hr/> <p>CBMA Enterprise Information Management (EIM) Strategy Page 6</p>
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Lack of oversight in all of the Agency's information holdings

The Agency has several million significant amounts of unpaired and unmanaged information holdings, some of which are described in the following examples. An unreviewed email database was linked and processed a small portion of the holdings. The format and distribution approach in tracking our information resource issues take place. Information also runs in multiple unmanaged repositories within the Agency and is not being deleted, nor categorized. The data is not linked to IR. The Agency must recognize and work with IR and other partners in our digital information management approach to apply all applicable information security requirements.

Limited ability to "coordinate" and engage the workforce

We are not currently providing a better an engaging and collaborative framework environment to leverage the workforce collecting input, organizational knowledge and abilities (e.g., coordination, operations, and resource knowledge) to meaningfully connect to all business activities in business resource will increase efficiency and productivity, facilitate upcoming knowledge transfer of corporate direction.

Limited Reach

Enterprise Information Management (EIM) is not sufficiently represented and integrated within portfolio in place a primary strategic risk and provide fundamental resource support.

Difficulty implementing efficient Electronic Records Management processes

The approach and solution to information lifecycle management from the existing document and record management environment the two main elements of the solution are the existing infrastructure, such as the IR, and the record-keeping and retention of the data and up to date to the existing IR. The solution is being reviewed to both the IR and up to date to the existing IR. The solution is being reviewed to both the IR and up to date to the existing IR.

6.3 External Drivers

In addition to internal pressure, department and agency are expected to comply and policies are directly related to management in government.

- The four Board members (three non-partisan judges and one politician) do not represent any political Party or interests – unique
- HS' Director of Regulation formulates policies to be enacted in all departments of the govt.
- HS' Director of Regulation which reports departmental regulations to the Director of the govt. – has open and secure system of reporting information, data, trends and multi-media – see
- Director of Regulation authorizes 'RV' – which enables government to take steps to intervene in the govt. – no further costs – directly require them to make towards with reducing the
- Director also on the will of the govt. to expand information resource – including also states in paper format after 2011
- In the 2010s – it helps the govt. to be a leading state in the use of paper are being shared to the regulatory departments

6.4 Agency Internal audit of HM (2015-2016)

In HS' participatory – internal internal audit – done from 2014-2016 to the office of the comptroller and auditor – we have to reach into the HM risk-based audit planning process – also a functional in all aspects of government – begin the govt. to support the state across making efficient – efficient – to deliver – the internal to achieve goals and mission of the government

In audit has identified that the agency has governance and internal monitoring framework in place to support it – however, it is currently a number of issues – issues – an agency with programs – a result there is an ongoing risk that it will not be recognized as a business culture – support on the agency's business opportunities – enhance roles and responsibilities – accountability – procedures and reporting and monitoring practices – for 10

It audit highlighted the following key findings:

- At many agencies – a major concern – a management function that does not influence the agency's strategy and operations – it does not use the internal external communication – question – means that all stakeholders are aware of their responsibilities
- Agency initiatives were established in the agency – the agency has not used internal communication – but not all employees with a responsibility

- Policies, guidance, tools, and training for the support and care of the employee
- Employee support and family programs and resources available for sick guidance
- An employee who is able to get support for necessary requirements of the
- The role of the audit system and human resources plan in support of the
- under development with a draft completed for September 2016
- The role of monitoring and reporting on the role of the human resources plan in support of the
- activities of monitoring and reporting on the role of the human resources plan in support of the
- identification of the role of the human resources plan in support of the

The findings of the audit confirm that ongoing efforts required to address the gaps identified in the 2014 external internal audit report and to address the change management.

• The audit findings regarding requirements:

- Further define the requirements for support and care of the employee
- Implement an ongoing monitoring system for the employee support and care of the
- The role of the audit system and human resources plan in support of the
- Monitor and Report on the role of the human resources plan in support of the

7 EIM Response

Direction

The response to the findings of the organization will take concrete actions in following through direction help in maintaining and ongoing efforts.



7.1 EIM Transformation

Productivity is the key to the success of the public sector. The new information needs of the agency must be taken into account in undertaking successful transformation.

Transformation & Adapt

A clear line of the re-assignment of the public services is required by the need to reduce costs and ensure a broader responsiveness and improve the agency information flow. In a transformational and agile world, a successful part of the 10 Strategic Roadmap

7.1.1 Modernized IM Skills & Competencies

With the 21st-century challenge to interact with our population, we must have a wide competence and an adequate level of knowledge to be able to follow our citizens in our information services, give technical answers to their queries and be able to form, educate and develop modern and multi-directional skills to be able to manage systems.

Key Skills

Human resources

- **Plan:**
 - **Define** the vision, mission, purpose, vision management & information literacy management
 - **Information architecture & design**
 - **Information systems** – current and new practices
 - **Processes** – **Information**: Retrieving and processing
 - **Tools** – **Information**: & **Information** tools
 - **Presentation and Negotiation** tools

Knowledge Areas

- **Understanding** of critical information flow in the agency
- **Agency's** responsibilities, authorities and sources of records
- **Process** and **tools** capabilities of the agency information system
- **Open** metadata models and standards
- **Information** governance and deployment structure

7.1.2 Transformation Activities

Perform IM Environment Scan (External and Internal)

- **Assess** organizational scan to identify gaps in current & future work with digitalization with new **Technical Board** of the Strategy 2016 (to support of the IR-IP) by 10/2016, 12 weeks
- **Assess** **Internal** – information & working group to conduct & enhance the current digitalization efforts as information process compliance and transparency for agency of IR-IP by 10/2016, 12 weeks

Develop Information Management Service Model

- **Assess** **Internal** – information & working group to conduct & enhance the current digitalization efforts as information process compliance and transparency for agency of IR-IP by 10/2016, 12 weeks
- **Assess** **Internal** – information & working group to conduct & enhance the current digitalization efforts as information process compliance and transparency for agency of IR-IP by 10/2016, 12 weeks
- **Assess** **Internal** – information & working group to conduct & enhance the current digitalization efforts as information process compliance and transparency for agency of IR-IP by 10/2016, 12 weeks

Harmonize IM Functions across the Agency

- Develop the proposal – create a 150-figure plan to improve and the alignment – and to ensure a good fit support a corporate information management strategy to the extent as possible – *initial 60 weeks*
- Integrate the Business Information Systems role of assets

Develop HR Plan and Investment Proposal

- Develop HR to bridge the gap between the current resource base and what it is needed to bring forward ideas – gap of skills and knowledge to do so – new initiatives – include change of focus – not consistent for resource – off site – *60/40/20/20*
- Request identification of the specific support team to carry out the specific implementation steps to be taken from now – and to integrate role through presentation – the *transition of resource from Project Portfolio – *transition* – 100% of resource* – *100% of 100% of 100%*

Develop Training & Development Plan

- Develop training programme – course and skills – a program for existing and new HR resources to develop skills, competencies and skill sets required to support business and the development of information resources in all formats – *development* – *off site* – *60/40/20/20*

8 Strategies & Actions

In order to support the vision, the following strategic directions are defined:

8.1 Strategy, Direction #1: CBISA's Information is Managed Responsibly



Goal: All information are consistent, timely and that coverage is available extension of the situation – team in charge use archival and deletion of information

Current Gap

Operational

- Regional & role are responsibility are clear and well understood in the

- Paper – electronic information unmanaged and unshared
- Inconsistent thinking in knowledge development
- Data is siloed and inaccessible to most of Agency

Compliance

- Lack of programmatic data for program – compliance

Value Chain

<u>Expected Outcome</u>	<u>Benefits</u>
<ul style="list-style-type: none"> ✓ Improved information to and from strategic strategic partners like Human and Financial Resources ✓ Improvement of people's Role and Responsibility in the work assigned in the business • gaps – information in modular spreadsheet – identified and accounted for ✓ Increase compliance and efficiency through business process improvement 	<ul style="list-style-type: none"> ✓ Improved Agency rating • Increase in the baseline ✓ Increased health of the Agency's information ecosystem ✓ Costly duplication of information

Targeted Actions

In order to reach the strategic direction the following actions are recommended:

- ***Develop National IM Performance Measurement & Reporting Framework***
 - Develop the key and meaningful metrics for the performance of the Agency's information business
 - Develop and set the indicator and metrics framework to enable better management of resources, resources record
 - gaps – operational data – knowledge in progress and data in the creation of a single data Performance Management framework aligned with the Agency Information Summary

identify and implement major information management system and monitor it

✓ **Strengthen IMF Role and Responsibilities**

Review the role of the institution and accountability, establish an internal and/or Suretyship

- Develop information accountability delegation model
- Develop co-construction plan
- Present communication plan to all

✓ **Perform Information Data Linkage Environment Scan**

- Link comprehensive inventory of the open information linkage

✓ **Continue to work towards compliance to the OI Policy suite**

- Support for the client of paper form
- OI Record open record
- Implement Open Government Service to Canadian
- CBSA Open Data Risk Assessment framework

✓ **Write down as high impact information management approach** [Approach to Information Management](#)

✓ **Write down as high impact information management approach** [Approach to Information Management](#)
Readings

2.2 Strategic Direction #2: CBSA's Information is Created and Resides in a Managed Eco-system



Goal: Build an engaging experience through an efficient Information Ecosystem on the go

Current Gaps

Operational

- Information Outlook not clear – currently doing a pilot check of institutional and accessible information

- Multiple stand alone and aging contracts

Outcomes

- Information not subject to document or a single person
- Increasing knowledge

Value Chain

Expected Outcome	Benefits
✓ Information is available to all the stakeholders	✓ A single information platform accessible and usable
✓ Contracted together and placed in network flow	✓ Access to data and information easily achieved
✓ Information can utilize market enterprise contract management platform to be shared.	✓ Information is protected and secure
✓ Information is free to be shared via business model	✓ Information management risk is reduced and transparency is increased

Targeted Actions

In order to reach the strategic direction the following actions are recommended:

- ✓ *Re-launch Agency for business transformation and adoption*
 - Improve team performance
 - Simplify and enhance services and flow
 - Transition client to unified platform
 - Upgrade digital to place transformation to online stage 100%
 - Develop information migration strategy & methodology
- ✓ *Optimize business information flows through enabling technology*
 - Create optimization pilot
 - Create optimized business & data flow
 - Create information workflow
 - Create information platform to support
- ✓ *Initiate Shared Drive clean-up and shut down*

- o Develop strategy and methodology
 - Work with business units to map and document
- ✓ *Modernize the way we do recordkeeping & information lifecycle management*
 - o Develop Information valuation and Prioritization system
 - develop new Records Disposition Strategy & Process
 - normal Policy Review & update
 - Strengthen & modernize records support in identifying areas for increasing, streamlining & disposition illustration also support to protect & protect the
 - o Phase out micro film to the most digitized records where feasible

We would share with the program that they need to have flexibility in changing their strategy

- The program agrees to have a strategic change of the strategy which is flexible in changing strategy

Program

E.3 Strategic Direction #3: Leverage Data to Measure and Improve Program Delivery



Goal: Transform the program support to data governance, increase intelligence and advanced analysis to drive better outcomes and decisions

Current Gaps

Operational

- Inability to derive the data required to perform high standard to all in operations
- Lack of data quality affects the agency's ability to make the right decisions
- Limited or unknown skillsets
- Technology challenges

Compliance

- Requirement to communicate mission and improve performance
- Spend too much time on compliance requirements to information that is in the public

Value Chain

Expected Outcome	Benefits
✓ Improved program delivery	✓ Improved cost-effectiveness
✓ Increased opportunities for growth efficiency across Agency	✓ Increased operational efficiency
✓ Single version of the truth	✓ Reduced Agency risk posture
✓ Increased opportunities for program value sharing	✓ Opportunities for cross-agency and savings

Targeted Actions

We defined three phases of the data strategy roadmap and the associated data strategy summary that will outline the strategy in full detail and serve as a platform for greater program documents.

data strategy initiative	English	French
Open Government Implementation Plan (OGIP) 2018	English	French

Data Governance

- ✓ 2016-2017
 - Establish data governance committee
 - Complete Business Data Strategy Phase II
 - Launch Open Government Implementation Plan (OGIP) 2018
- ✓ 2017-2018
 - Launch middle management process
 - Operational Review completed
 - Release planning of data and information (RDI) 201
- ✓ 2018-2019
 - Ongoing data governance, quality control
 - Ongoing cross-agency
 - Ongoing efforts to curating information (RDI) 2018

Business Intelligence

- ✓ 2006-2007
 - Enterprise Integrated Data Warehouse (EDW)
 - Define requirements for Integrated Performance Reporting (IPR) tool, including access to the EDW data warehouse
- ✓ 2007-2008
 - Data acquisition and review delivery
 - Seek capital investment funding, project launch
- ✓ 2008-2009
 - Upgrade data acquisition and review delivery
 - Project implementation and launch delivery

Advanced Analytics

- ✓ 2006-2007
 - Formalize analytical model creation e.g. grouping intelligence program projects, experimentation pillars e.g. model creation, IP, P&R
- ✓ 2007-2008
 - Implement operational analytics environment
 - Expand data science capacity
- ✓ 2008-2009
 - Engaging people, organizational maintenance

Open Government

- ✓ 2006-2007
 - Develop strategy for integrating a data for open government
 - Review the open technology landscape, the strategy for leverage
 - Develop the required work to support the management of the data sets and the publishing of datasets
 - Review the Access Request Plan
 - Develop methodology for the information inventory
 - Conduct and approve new open government policies and principles
 - Develop an current baseline of open government information of government structure and the content
- ✓ 2007-2008
 - Conduct information system and/or related information Release Plan
- ✓ 2008-
 - Focus on the release of Open Information

we would do this as two separate items on the same page as the other items. The first item is the proposed action to drive the overall objective of the strategy plan or program. The second item is the proposed

8.4 Strategic Direction #4: Connect and Empower the workforce to succeed



Goal: Instill the right values to create a collaborative culture where information is treated as a resource and an aspect of efficient work management.

Current Gaps:

Operational

- Information silos exist in place
- Limited human resources inhibit efficient resource allocation

Cultural

- Lack of transparency and accountability
- Open Communication and Open by Default not part of culture

Expected Outcome

Expected Outcome	Benefits
✓ In workforce operational within collaborative network	✓ Increased productivity and facilitated operations
✓ In organizational culture and behavior is predictable and reliable	✓ High performance information ecosystem
✓ In organizational human resources are empowered with desirable and usable information to work	✓ Increased idea generation, creation and knowledge sharing

Targeted Actions:

It must be noted that strategy dictates the following actions are recommended:

- **Identify and pursue collaborative networking opportunities using digital capabilities**

- Collaborate with local, state, and national
- Identify appropriate people

Increase quantity and availability of IM and Apollo training and coaching

- Develop Training Strategy
- Develop a multi-tiered approach:
 - primary tier: train training
- Develop a self-service training/financial portal

- **Create Culture Change Management strategy**

- Develop a large-scale communication Plan that will help promote our 'disruptive ideas and proposals'
- Establish IM and IMC influence network

- **Increase connectivity and integration capabilities**

- Enable external Apollo-related movement of Blockchain-based
- Enable internal applications: digital requirements
- Integration of Apollo to enterprise Search capabilities

- **Further develop internal systems - build strong system Integration - enabling processes**

- Build systems which support a digital culture of a company that is Intuitive - easy to learn

Summary

10 APPENDIX B IM Landscape Root Cause Analysis

Causes



SD1.1	<u>Develop</u> National IM Performance Management & Reporting Framework	4m	EMAP
SD1.1.1	Design tracking and measuring method for our performance in managing our business information holdings	0.7m	
SD1.1.2	Propose and seek HLF endorsement to create framework in order to track the management of paper and electronic records	1m	In support of IM EMAP 4.2 21/11/2016
SD1.1.3	Engage Corporate Affairs Branch for guidance and advice in the creation of a meaningful IM Performance Management Framework aligned with the Agency Performance Summary	0.5m	In support of IM EMAP 4.2 30/10/2016
SD1.1.4	<u>Identify</u> key performance indicators for information management well defined and monitored	0.3m	
SD1.2	<u>Strengthen</u> IM Roles and Responsibilities	4m	EMAP
SD1.2.1	Review IM Roles, Responsibilities and Accountabilities Establish Information and Data Stewardship Strong governance and understanding of roles and responsibilities	1m	In support of IM EMAP 4.2 11/06/2016
SD1.2.2	<u>Develop</u> information accountability delegation model	2m	In support of IM EMAP 21/07/2016
SD1.2.3	<u>Develop</u> communication plan	1m	In support of IM EMAP 4.2 21/07/2016
SD1.2.4	<u>Review</u> communication plan to EL		In support of IM EMAP 4.2 10/08/2016
SD1.3	<u>Enhance</u> Information Data Holdings management system	12m	EMAP
SD1.3.1	Build a comprehensive inventory of the Agency's information holdings	12m	
SD1.4	<u>Continue</u> to work towards compliance to the OC Policy suite	Ongoing	EIMD
	<ul style="list-style-type: none"> Full support for elimination of paper forms Recordkeeping directive Implement Open Government Service to standardise UKA Open Data Risk Assessment framework 		

11.2 Strategic Direction 2



Goal: Back on engaging experience through an efficient information ecosystem on the go.

SD2.1	<u>Re-Engine</u> Apollo for business onboarding and adoption	18m	51M\$
SD2.1.1	Improve system performance	4m	
SD2.1.2	<u>Simplify</u> information structure and rules	3m	
SD2.1.3	<u>Consolidate</u> items to simplified structure	5m	
SD2.1.4	<u>Upgrade</u> Apollo to latest product iteration (Conquer Suite 2016)	3m	
SD2.1.5	<u>Develop</u> information migration strategy & methodology	3m	
SD2.2	<u>Optimize</u> business information flows through enabling technology	25m	21M\$
SD2.2.1	Initiate Envision or pilots Conquer Optimization strategy (3m) Pilot 1: [ibid] (2m) Pilot 2: [ibid] (2m)	6m	
SD2.2.2	<u>Enable</u> automated metadata tool, auto-classification, etc. for staged implementation <u>Enable</u> Metastore & Rich Description strategy (2m) Increase the usability and manageability of our business information through rich description Metadata capture and generation is automated Common Metadata strategy in place <u>Enable</u> Auto Classification solutions (6m) <u>Enable</u> Metadata automation Tools (3m)	11m	
SD2.2.3	<u>Integrate</u> augmented workflows	3m	
SD2.2.4	<u>Enable</u> Electronic Signature integration	1M	
SD2.3	<u>Initiate</u> Shared Drive clean-up and shut down	15m	21M\$
SD2.3.1	<u>Develop</u> strategy and methodology (3m)		
SD2.3.2	<u>Work</u> with partner in clean-up and shutdown (11m)		
SD2.4	<u>Modernize</u> the way we do recordkeeping & Lifecycle Management	13m	
SD2.4.1	Develop Information valuation and Prioritization system New rational risk based framework and solution for electronic recordkeeping Focus on Business informed on Records Classification	2m	
SD2.4.2	<u>Develop</u> new Records Classification Strategy & Process	3m	
SD2.4.3	<u>Implement</u> Policy Review & Update	3m	
SD2.4.5	Strengthen foundational records support by identifying and determining retention and disposition timelines across regions	3m	In support of IM BMAP 2.2 10/12

11.3 Strategic Direction 3



Goal: Transform the global expertise in data governance, master intelligence and advanced analytics to drive better business and decisions

As defined in the Plan for the 2016-2020 period, business and best strategies must be implemented as part of the 2016-2020 strategy for all countries. Please refer to specific strategic documents.

See [2016-2020 resolution](#) and [2016-2020](#)
[Open Governance Implementation Plan ADXJP](#) [LINK](#)



Scope

Duration

Owner

Alignment

503.1 Data Governance

503.1.1 2016-2017

- Establish Data Governance Council
- Complete Business Data Model - Phase II
- Launch Open Government Implementation Plan (OGIP) 2016

503.1.2 2017-2018

- Continue to address data integrity priorities
- Operationalize Business Data Model
- Release planning of data and information - OGIP 201

503.1.3 2018-2019

- Ongoing data governance, quality control
- Ongoing maintenance
- Ongoing delivery of data and information - OGIP 2018

Business Intelligence

503.2

2016-2017

503.2.1

- Establish Integrated Data Warehouse (IDW)
- Define requirements for Integrated Performance Reporting (IPRI) tool

2017-2018

503.2.2

- Establish Integrated Data Warehouse (IDW)
- Define requirements for Integrated Performance Reporting (IPRI) tool

2018-2019

503.2.3

- Ongoing data acquisition and service delivery
- Project implementation and routine delivery

Advanced Analytics

503.3

2016-2017

503.3.1

- Ongoing data acquisition and service delivery
- Project implementation and routine delivery

2017-2018

503.3.2

- Implement operational analytics environment
- Expand data science capacity

2018-2019

503.3.3

- Ongoing people management, maintenance

Open Government

503.4

503.4.1 2016-2017

- Identification and cataloging of data for Open Government

		<p>Execute the Agency's Methodology for Establishing a Data Inventory</p> <p>Develop the required tools to support the management of the Inventory and the publishing of datasets</p> <p>Execute the Dataset Release Plan</p> <p>Develop methodology for the information inventory</p> <p>Endorse and approve new Open Government policies and priorities</p> <p>Process-investment business case for non-structured information conversion (e.g. machine readable format)</p>
103.4.1	201	2016
		Conduct information inventory and associated Information Release Plan
		2018-2019
103.4.2		Focus on the release of Open Information

11.4 Strategic Direction 4



Goal: Build the right structure to create a culture and culture where innovation is a means to a strategic objective to support information leader management

ID	Action	Duration	Owner	Alignment
----	--------	----------	-------	-----------

SD4.1	<u>Identify and promote collaborative networking opportunities using Apollo capabilities.</u>	2m	EIMD	
SD4.1.1	<ul style="list-style-type: none"> collaboration reference model and patterns More it easier for people to <u>upload, share and discover</u> information <ul style="list-style-type: none"> Enterprise electronic Team Workspaces Active document management features Ability to find information throughout all repository - reliably Web & Discussions Allow people to connect and follow other's social business streams <ul style="list-style-type: none"> Early find other user's profile and connect with them Enterprise Social Pulse - Timeline, Activity & Notification, Follows, etc. Instant Messaging Tasks & Team Work Tracking 	11		
SD4.1.2	Early adoption project <ul style="list-style-type: none"> Collaboration Pilot 1 (rd05) Collaboration Pilot 1 (rd05) Collaboration Pilot 3 (rd05) 	141		
SD4.2	<u>Increase quantity and availability of IM and Apollo training and coaching</u>	11m	EIMD	
SD4.2.1	Develop Training Strategy	11		
SD4.2.2	Develop a Train-the-Trainer approach	311		
SD4.2.3	Expand power user training	111		
SD4.2.4	Develop a self-service training/tutorial portal	611		
SD4.3	<u>Create Culture Change Management strategy</u>	11m	EIMD	In support of IM MTRAP - 3 SD/1 & SD/6
SD4.3.1	Develop a Change Management Plan that will help improve our Information Culture and Awareness? <ul style="list-style-type: none"> Communication plan Training and Coaching Innovation Goals 	141		
SD4.3.2	<u>Establish the IM Guides - Influencer network</u>	611		
SD4.4	<u>Increase connectivity and integration capabilities</u>	711		
SD4.4.1	Apollo Mobility assessment	111		
SD4.4.2	Apollo business app integration - Apollo by requirements	211		
SD4.4.3	Integration of Apollo to Enterprise Search Capabilities	411		



Canada Border
Services Agency

Agence des services
frontalières du Canada

1-877-975-3739

CBSA Information Management Strategy

Information Management Committee (IMC)

Information Science and Technology Branch (ISTB)

August 23, 2016

Apollo # 3906207

PROTECTION • SERVICE • INTEGRITY

Canada

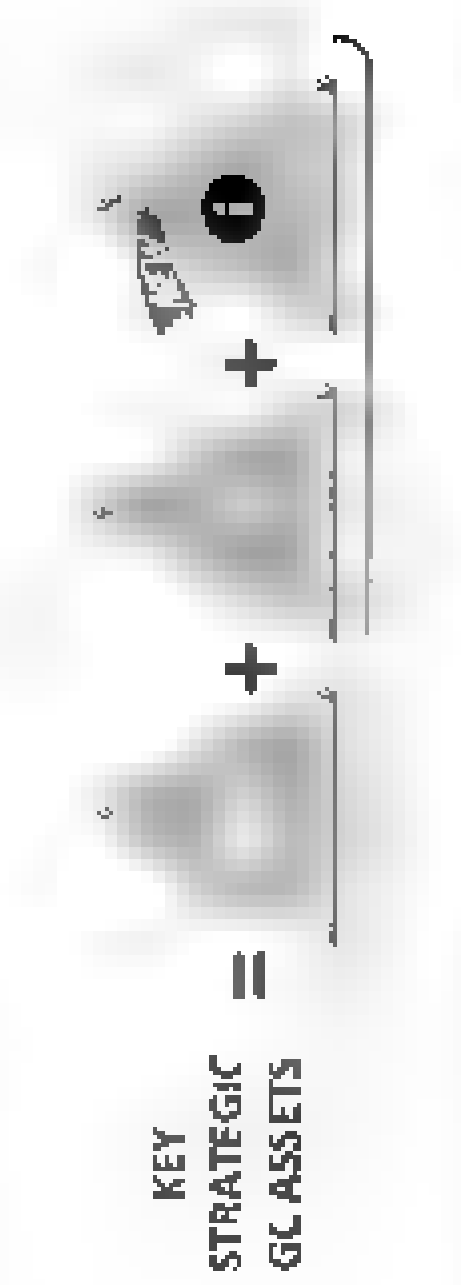
Agenda

- Value Proposition
- The Changing Information Environment
- The CBSA IM Vision
- IM Principles
- 3 Year IM Strategy
- 2016/17 Action Plan Highlights
- Risks / Challenges
- Summary
- Annexes

Value Proposition

Information is a Business Resource (like Human Resources and Finance) Not managing it is not a viable option

- Information can enable us and overwhelm us There's such a thing as "Too much information"
- Everything we do within the Agency starts with information and generates more information
- The Agency renders decisions every minute using "Information"



Desired Outcomes of Information Management Strategy

- Globally, the information environment has become increasingly complex and challenging to manage
- Tools and techniques are evolving but fall short of optimizing Agency Information as a critical resource
- The IM strategy drives the paradigm shift from traditional IM approaches and solutions to what is and will continue to be required moving forward in the public service

Domain of Activity	Current State	Desired Outcome
IM is a foundational business support	Compliance-focused, primarily reactive involvement in business processes and operations	Proactively involved with business clients (as early as planning stage) focused on improving information flows and availability of information
IM Services support the business in managing Agency Information	Aggregated, piecemeal, enterprise-wide solutions (often high complexity, misdirected)	Relevant, valuable, and efficient Services Tools and Solutions provided to business client →Business value (not mission)
Management of Information is focused on align value information resources	all unstructured information treated as equally important making it difficult to focus resources and efforts strategically	Risk-based approaches successfully applied to minimize managing management of Information and focus resources on information of business value (if equal efforts on high-value resources)
Agency information is lifecycle managed to ensure high value information is not lost	Reliance on uniform and standard functionality proposed by common management systems strategy	Innovative use of a wide spectrum of solutions to flexibly and programmatically develop the Agency's capability to perform information lifecycle management (slowly move yardstick forward)
Information Management program activities and initiatives are designed around CBDA business needs	Sequential, records based processes with little client input, narrow focus, multi-year deliverables, set of requests	Proactive, progressive records early adoption, scaling with project changes, building up support and user comfort
Information Resources of Business Values are identified, mapped and organized for efficiency and productivity	Services across multiple unstructured resources, low visibility, out-of-context, low usability of the information	Centralized, highly integrated enterprise content management platform, metadata-rich, High usability, usability of information

Vision

- The Information Management Committee (IMC) approved Principles (April 2016) lay the foundation for an IM strategy that supports the creation of an Agency information ecosystem of managed repositories, a connected and networked workforce, and alignment to Government of Canada (GC) IM policy and direction.

CBSA IM Vision

Develop the value of information by
 - creating a culture of information
 - connecting information
 - connecting people
 - connecting information
 - connecting people
 - connecting information
 - connecting people



Principles

Managed
 Responsible
 Connected
 Empowered
 Improved
 Measured and
 Improved

CBSA IM Principles

The CBSA IM principles provide the framework to help us understand and organize our efforts and develop

IM Principles

Key Deliverables



CBSA's information is Managed
Responsibly

Create an information accountability framework that encourages desirable behavior in the valuation, creation, storage, use archiving and deletion of information.



CBSA's information is Created and
Resides in a managed Eco-system

Continue Agency adoption of Apollo. Increase management of email business information and decommissioning of network drives in support of Agency business and alignment to Gx



Leverage Data to Measure and Improve
program delivery

Mature the Agency's capability for data governance business intelligence and advanced analytics to drive better risk management enforcement and decisions



Connect and Empower the workforce to
succeed

Action organizational culture change through communications marketing, and workshops to facilitate the sharing of information and knowledge as a strategic asset for efficient border management

3 Year IM Strategy Road Map

2016/17

- Continue user on-boarding of Apollo in HQ and on-board regions
- Continue to assist users in the management of email information of business value in support of Email Transformation Initiative
- IM Services environmental scan and alignment with new GIL IM Strategy
- Action all internal CBSA and Office of Comptroller General Audit deliverables
- Initiate Network Drive clean-up and shut down 'campaign'
- Transformation of EIM Division - HP Plan and Financial Sustainability
- Begin executing the CBSA Open Government Implementation Plan
- Identify releasable data sets for Open Government and begin release
- Publish CBSA conceptual information architecture v1
- Implement the CBSA Data Analytics Business Case

2017/18

- Continue standardization of IM functions across the regions
- Identify and map data information repositories with information architecture that reflects business model
- Modernization of Recordkeeping and information lifecycle management
 - Initial electronic disposition via Apollo
- Begin release of identified data sets for Open Government

2018/19

- Revise 3 year IM strategy based on results achieved and GIL direction
- Migration of Apollo to J4 Hosted GCDCS environment
- Increase integration with information systems and technology
- On-going release of approved data sets for Open Government

On-going improvement and activities in support of
IM Education Awareness Roles and Responsibilities
performance monitoring and measurement

2016/17 Action Plan Highlights

As part of the overall 2016-2018 Strategic Direction Roadmap the following activities are proposed for the current fiscal year 2016/17 one year plan.



IM Transformation Activities

- Environmental scan to identify gaps between current IM services and TBS Government of Canada IM Strategy (2016/17) (Issue 1: High level issues) (2016/17)
- Develop new IM Service Model and related IM services (2016/17) (2016/17)
- Propose common IM services components (2016/17) (2016/17)
- Develop Human Resources Plan Training and Development Plan and Investment proposal in support of changing IM services and services (2016/17) (2016/17)



Strategic Activities

- Continue business on-going and adoption of Apollo (2016/17) (2016/17)
- Initiate Shared Drive clear up and shut down (2016/17) (2016/17)
- Execute the approved BSA Joint Government Implementation Plan (2016/17) (2016/17)
- Implement the BSA Data Analytics Business Case (2016/17) (2016/17)
- Develop IM Performance Management framework and associated work (2016/17) (2016/17)
- Review IM Roles Responsibilities and Accountabilities within the Agency (2016/17) (2016/17)
- Develop IM Roles Responsibilities and Accountabilities communication plan (2016/17) (2016/17)
- Increase IM Awareness activities including communications workshops outreach support of organizational culture change (2016/17) (2016/17)
- Increase training and availability of IM and Apollo training and coaching (2016/17) (2016/17)

Risks / Challenges

Risks	Description	Proposed Mitigation
-------	-------------	---------------------

Employee Awareness	Disengagement of workforce in the management of information	Ongoing awareness and communications Specific controls to facilitate information management including obligation to save in Apollo read only network drives no email attachments.
--------------------	---	--

External Service Delivery	Delivery date of GCDQCS Hosted Service not expected before 2018-1E	Continue with CBEA hosted solution while continuing to align with service provider via/onvarchitecture
---------------------------	--	--

Treasury Board Secretariat IM Strategy	Potential upcoming changes to TBS GC EIM Strategy Policy and Directives	Proactively engage and collaborate with central agencies through key committees to monitor trends and changes
--	---	---

Funding	Insufficient resources to support EIM program and enable transformation over multiple years	Prioritize strategic action plan and focus resources on key business support activities
---------	---	---

Data vs Information	Structure databases are subject to same Information Lifecycle management policy requirements	Complete the information and data architectures with a focus on Mission Critical services and systems
---------------------	--	---

Summary

Recommendations for IMC:

- Endorsement of 3 year IM strategy
- Provide on-going advice and guidance as 1 year action is implemented
- Provide ambassadorship role through visible senior management 'leading by example' and setting of IM expectations
- Monitor IM Strategy progress quarterly at IMC and annually at Executive Committee

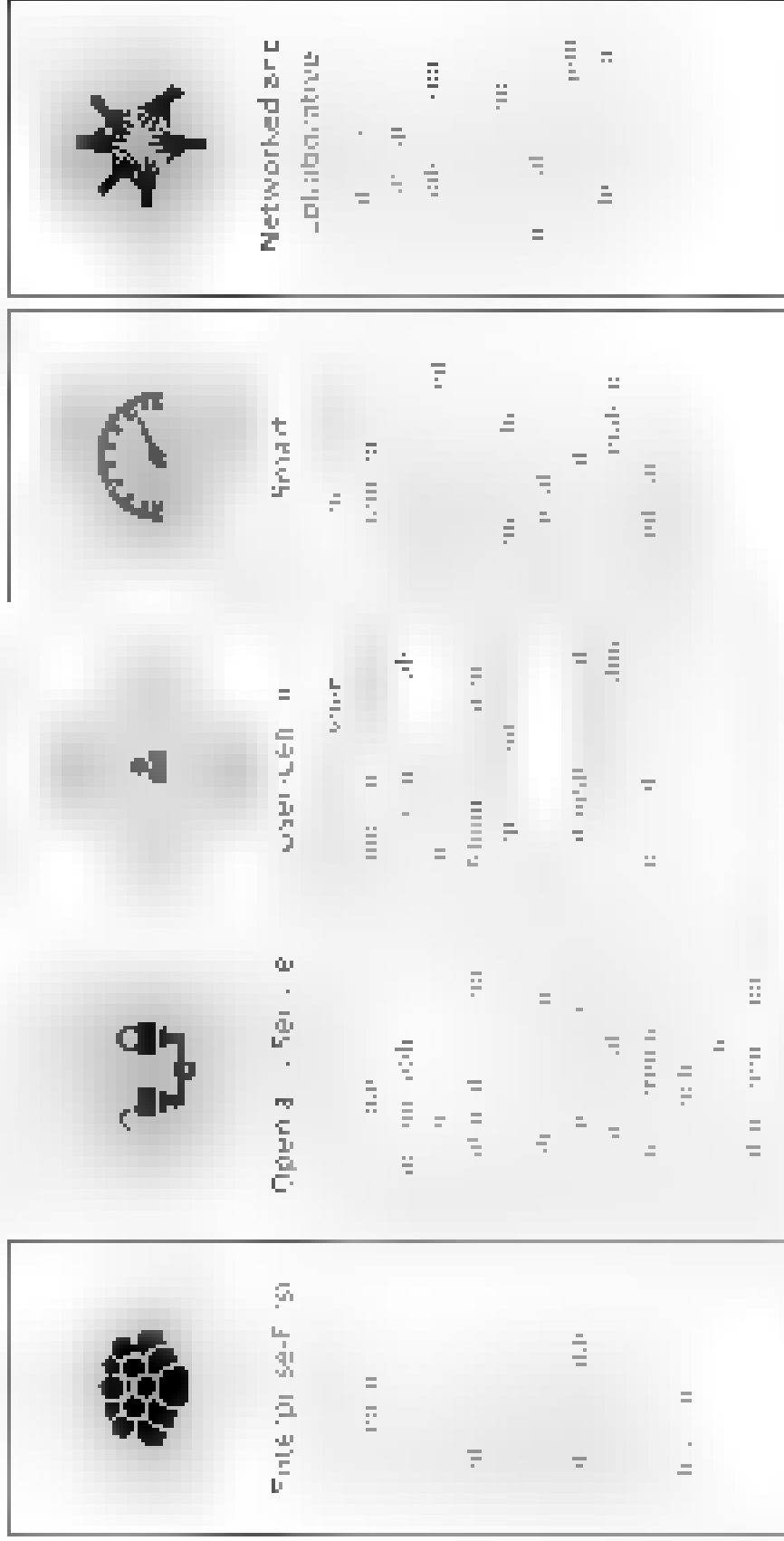


IMMOR POLIM

ANNEXES

Guiding Principles

CBSA EIM adopts Guiding Principles defined in the Government of Canada Enterprise Information Management Strategy as follows



TBS Mandated Roles and Responsibility

- TBS provides a Policy Statement (PS) to introduce key changes in the roles and responsibilities for the management of information
 - The PS states that TBS will continue to work with the other departments to ensure that the information management system is a key part of the government's information management system. It will also ensure that the information management system is a key part of the government's information management system.
 - The PS states that TBS will continue to work with the other departments to ensure that the information management system is a key part of the government's information management system. It will also ensure that the information management system is a key part of the government's information management system.
- Other responsibilities for Deputy Ministers and the PS include:
 - The PS states that TBS will continue to work with the other departments to ensure that the information management system is a key part of the government's information management system. It will also ensure that the information management system is a key part of the government's information management system.
 - The PS states that TBS will continue to work with the other departments to ensure that the information management system is a key part of the government's information management system. It will also ensure that the information management system is a key part of the government's information management system.

Impetus for Change

Internal Drivers

- Aging information flows and business processes
- Information is born created in unmanaged electronic repositories
- Information stockpiling
- Lack of oversight on most of the Agency's information holdings
- Limited ability to facilitate bringing together new ideas (crowdsourcing) and engagement of the workforce
- Limited Reach of Information Management support services
- Difficulty implementing efficient Electronic Records Management processes

External Drivers

- TBS GC Enterprise IM Strategy and Policy on Information Management
- TBS's Directive on Recordkeeping prescribed level of maturity
- TBS's Directive on Open Government
- LAC issuance of Records Disposition Authorities (RDA) and information disposition requirements
- LAC no longer be accepting information of enduring value created in paper format after 2017
- As of July 2015, LAC no longer stores records that are not of enduring value Boxes of paper are being returned to the originating departments

Agency internal audit of IM (2015-16)

- CBSA participated in a horizontal internal audit of IM carried out in 2015-2016 by the Office of the Comptroller General (OCG).
- The audit has identified that the Agency has governance and some monitoring frameworks in place to support IM; however IM is currently delivered as a number of initiatives instead of an Agency-wide program
- As a result there is an ongoing risk that IM will not be integrated as a foundational business support for the Agency's activities
- Opportunities exist to enhance roles and responsibilities accountabilities procedures and reporting and monitoring practices for IM
- The audit reported several findings and issued the following recommendations:
 - 1 Further define and communicate IM responsibilities and accountabilities.
 - 2 Implement and communicate standard IM tools guidance and best practices across the Agency
 - 3 Develop and implement Agency-wide operational and human resource plans for IM and
 - 4 Monitor and Report IM on a regular basis



CBSA's Information is Managed responsibly

OUTCOMES

The Agency's information is treated and managed as a Strategic Resource (like Human and Financial Resources)
Information Accountability, Roles and Responsibilities are effectively delegated and monitored
Agency information in multiple repositories is identified and accounted for
Increased compliance and efficiency through business process improvement



BENEFITS

Improved Decision Making
Decreased costs and liabilities
Increased health of the Agency & information ecosystems
Strong Management Accountability

CURRENT GAPS

Operational

Regional IM roles and responsibilities are often not benchmarked or defined
Paper electronic information unmanaged and unpaired
Data quality challenge no identified stewardship roles
Data is siloed and inaccessible to most of Agency

Compliance

Lack of information lifecycle management is a compliance risk

KEY INITIATIVES

National IM Reporting Framework
Strengthen IM Roles and Responsibilities
Perform Information Data holdings environment scan
Continue to work towards compliance to the GL Policy suite
Organizational change management plan in support of collection and information sharing



CBSA's information is created and resides in a managed Eco-system

OUTCOMES

- Users have access to new value-added features
- Older technologies can be phased out (i.e. network drivers)
- Information is born within a modern enterprise content management platform (ECM Standard)
- Information is effectively connected to a business process



BENEFITS

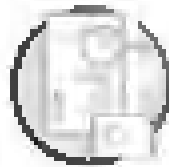
- The agency's information is richer, easily accessible and re-usable
- Access permissions and collaboration is facilitated
- Increased user productivity and efficiency
- Information Management tasks can be integrated and transparent for users
- Currently unused or under-used information assets (see the legacy/eggs)
- Organizational knowledge and memory is protected

CURRENT GAPS

- Operational
 - Network driven Outlook, local drives and PSTs
 - currently large repository of unstructured and currently unusable business information resources
 - Multiple stand alone and aging systems
- Compliance
 - Information not managed per GR regulation
 - No efficient process in place to efficiently purge information - increased liability and clutter

KEY INITIATIVES

- Re-launch Apollo for business onboarding and adoption
- Optimize business information flows through enabling technology
- Shared Drive clean-up and shut down
- Capture business information in closed repositories
- Modernize the way we do recordkeeping and Lifecycle Management



Leverage Data to Measure and Improve performance

OUTCOMES

- Improved program delivery
- Identifying opportunities for greater efficiency across Agency
- Single version of the truth
- Increased opportunity for organizational learning



BENEFITS

- Improved situational awareness and decision-making
- Increased competitiveness and efficiency
- Reduced Agency risk posture
- Opportunities for cost avoidance and savings

CURRENT GAPS

Operational

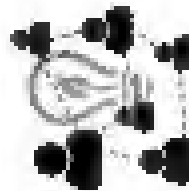
- Challenge in accessing data required to perform line sensing from-line operations
- Poor data quality affects the Agency's ability to make the right decisions
- Limited workforce skillsets
- Technology challenges

Compliance

- Requirement to continuously measure and improve performance
- Open Government Directive requires proactive release of information and data to the public

KEY INITIATIVES

- Data acquisition involving the identification and prioritization of CBSA, BIC, and third-party data
- Establishing a task force dedicated to privacy and security
- Applying best practices from BS partners
- Workforce skill development and recruitment
- Execute the approved CBSA Open Government Implementation Plan (OGIP)



Connect and Empower the workforce to succeed

OUTCOMES

- The workforce operates within collaborative networks
- The Agency's IM culture and behavior is predictable and effective
- The Agency's human resources are empowered with accessible and usable information resources



BENEFITS

- Increased productivity and facilitated operations
- A high performance information ecosystem
- Increased idea generation, creativity and knowledge sharing

CURRENT GAPS

Operational

- Information currently in silos
- Outdated business processes inhibits efficient business collaboration

Compliance

- IM is viewed as an EIMD responsibility
- Open Government and Open by Default not part of culture

KEY INITIATIVES

- Identify and promote collaborative networking opportunities using Apollo capabilities
- Increase quantity and availability of IM and Apollo training and coaching
- Create Culture Change Management strategy
- Increase connectivity and integration capabilities

	2016				2017				2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
 BLM Bureau of Land Management	Develop and implement (internal and external) Strategic Information Management System Model Information system for the Bureau of Land Management Develop and implement (internal and external) Strategic Information Management System Model															
 Bureau of Reclamation Department of the Interior	Develop and implement (internal and external) Strategic Information Management System Model Information system for the Bureau of Reclamation Develop and implement (internal and external) Strategic Information Management System Model															
 Bureau of Indian Affairs Department of the Interior	Develop and implement (internal and external) Strategic Information Management System Model Information system for the Bureau of Indian Affairs Develop and implement (internal and external) Strategic Information Management System Model															
 Bureau of Ocean Energy Management Department of the Interior	Develop and implement (internal and external) Strategic Information Management System Model Information system for the Bureau of Ocean Energy Management Develop and implement (internal and external) Strategic Information Management System Model															
 Bureau of Land Management Department of the Interior	Develop and implement (internal and external) Strategic Information Management System Model Information system for the Bureau of Land Management Develop and implement (internal and external) Strategic Information Management System Model															
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Science and Engineering Directorate

Border Technology Division

Division Report 2016-08 (TR)
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Predictive Analytics Pilot in the Traveller Stream

Sofia Auer and Darren
Coughirey

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